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Begonia conipila Irmsch. *ex* Kiew (Begoniaceae) from the Gunung Mulu National Park, Sarawak, Malaysia

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Abstract

Irmscher's name, *Begonia conipila*, is validated for the striking species that grows on the Melinau limestone in Sarawak, Borneo.

Introduction

The scientific name of this most distinctive species was in fact never validly published although, following Irmscher's annotated specimens, it has become the accepted name and specimens of it are correctly identified in herbaria and the name has appeared in print (Anderson & Chai, 1982; Jangowe, 1999). It is timely therefore to validate the name of his species, particularly because it is seen by most visitors who climb Gunung Api in the Gunung Mulu National Park.

Low's specimen is selected as the lectotype as it is the earliest collection and was annotated as a new species by Irmscher.

Begonia conipila Irmsch. *ex* Kiew
Section *Petermannia*

A *Begonia havilandii* Ridl. foliis minoribus, tepalis masculis 2 et fructibus oblongis differt - LECTOTYPUS: 'Mooloo' (Gunung Mulu National Park) *Low s.n.* (K).

Creeping herb or low root climber, roots fibrous produced at nodes in contact with substrate, indumentum of stiff, white, uniseriate, eglandular trichomes, c. 2—5 mm long, each on a raised conical base, dense on young stem, petiole, on stipule margin and outer surface of stipule midrib, on the lamina dense on the upper surface, margin and lower surface of veins, some on lower lamina surface. *Leafy stem* 15—25 cm long and 2—3(—4) mm diam., little branched, internodes 2.5—5 cm long. *Stipules* lanceolate with a distinct midrib, 7—12 x 4—7 mm, margin entire, apex setose, persistent. *Leaves* alternate, distant, *petiole* 1—2 cm in upper leaves elongating to 2—5 cm in lower leaves, *lamina* somewhat bullate, variegated,

upper surface dark green to blackish purple, paler between veins, the lower surface reddish, rarely light green, in dried state thin and papery, conical hair bases giving a pustulate appearance above, asymmetric, broadly ovate to reniform, 4—7.5 x 3.5—8.5 cm, broader side (2.25—)3.5—5 cm wide, base rounded to cordate, lobes slightly overlapping, basal lobes rounded, (0.75—)2—3.5 cm long, margin irregularly serrate, each tooth setose, apex cuspidate; *venation* palmate, main veins 3, equal-sized, branching c. halfway to margin, with another 1—2 veins in basal lobes, impressed above and prominent beneath.

Inflorescence axillary, whitish or light green, hispid, erect, longer than petioles, racemose, 3.5—9.5 cm long of which peduncle is 1.5—6 cm, protogynous with a single basal female flower and many male flowers distally on 2 short lateral branches c. 3—11 mm long and crowded in a terminal cluster; *bracts* similar to stipules, c. 5—6 x 3 mm, persistent; *bracteoles* light green or whitish, broadly ovate, 0.75 x 0.25 mm, apex setose, persistent. *Flowers* with white, translucent tepals. *Male flower* with whitish or light green *pedicel*, c. 1—3 mm long; *tepals* 2, sparsely hispid on upper half of outer surface, broadly elliptic, c. 5 x 3.5—4.5 mm, margin entire, apex rounded; *stamens* yellow, c. 10—11, in hemispherical cluster joined in a torus c. 0.5—0.75 mm, *filaments* between 0.25 mm on lower stamens to 1 mm long in the distal ones, *anthers* bright yellow, obovate, c. 0.75—1 mm long, emarginate, opening by pores. *Female flower* with *pedicel* c. 3—5 mm long, light green, finely hispid; *ovary* narrowly oblong, c. 7.5—11 x 3—5 mm, wings 3, subequal, two shorter 1.5 mm and broader one 2 mm wide, locules 3, placentas axile, bilamellate with many ovules on both surfaces; *tepals* 5, isomorphic, narrowly lanceolate, c. 7—7.5 x 3—4 mm, margin entire, apex acute, sparsely hispid on outer surface; *styles* 3, free to base, 5 mm long, bifurcating; *stigma* greenish, papillose forming a continuous twisted band. *Fruit* pedicel stiff, decurved, (2—)4—6(—8) mm long, *capsule* oblong, c. (11—)18—20 x 10—15 mm, sparsely hispid, locules 3 but one scarcely developed, dehiscing between wing and locule, wings thin, narrowed to base, truncate distally, two narrower wings, c. 3—5 mm wide, broader wing c. 5—7 mm wide, style not persistent.

Distribution: Borneo - SARAWAK: endemic to the Melinau limestone in the Gunung Mulu National Park (on Gunung Api and low limestone outcrops along the Sungai Melinau).

Habitat: It grows from the base of limestone outcrops to c. 1170 m in lower montane limestone forest on Gunung Api, usually on limestone boulders but also on steep screes in deeply shaded habitats.

Notes: *Begonia conipila* is typical of section *Petermannia* in possessing upright (although weak) stems (as opposed to prostrate rhizomes), protogynous inflorescences with the female flower basal and the male flowers distal, male flowers with two tepals and obovate anthers that open by pores, and female flowers with five tepals, three free styles and a 3-loculate ovary with bilamellate placentas. The fruit is interesting in that one locule is hardly developed (it is about a quarter the size of the other two). A similar situation is seen in *B. amphioxus* (Kiew, 2001).

In its creeping stem with erect branches, broadly obovate leaves with stiff pale hairs, serrate leaf margin with each tooth tipped by a long hair, the few stamens in the male flowers, and the 3-loculate ovary with bilamellate placentas, it resembles *B. havilandii* Ridl. from Sarawak. However, it is distinct from this species as *B. conipila* has smaller leaves (they are c. 6—10 cm long in *B. havilandii*), male flowers with two tepals (four in *B. havilandii*) and an oblong capsule (orbicular in *B. havilandii*).

With its small, variegated leaves, it is as Low noted on his specimen, 'a charming plant'. Jangowe (1999) illustrates this species with a fine colour photograph.

Specimens examined: SARAWAK: Gunung Mulu National Park - *Low s.n.* 'Mooloo' (K); Gunung Api - *Abang Moktar S49606* (SAN, SAR), *Anderson S4287* (K, SAR), *S30732* (SAR, SING), *B.L. Burtt B8354* (SAR), *P. Chai S30054* (SAR), *S35790* (SAR), *C. Hansen 102* (SAN, SAN), *P.J. Martin S38257* (SAR), *I. Nielsen 502* (SAR), *B.C. Stone 13693* (SAR), *Yii P.C. & Abu Talib S58845* (SAR); limestone on Sungai Melinau *Chew Wee Lek CWL 1055* (SAR, SING), *B.C. Stone 13598* (KLU, SAR).

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